DOCUMENT RESUME

ED 194 088 IR 008 955

AUTHOR Tenopir, Carol
TITLE Realistically Reassessing the Costs and Functions of Special Libraries.
PUB DATE 80
NOTE 22p.: Paper presented at the Annual Meeting of the Special Libraries Association (Washington, DC, June 8-12, 1980). Best copy available.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Business: *Cost Effectiveness: *Costs: *Economic Climate: Industry: *Library Administration: *Library Services: *Special Libraries

ABSTRACT

An assessment of an increasingly tight national economy dictates a reevaluation of the costs and functions of the corporate special library if it is to survive recessionary pressures intact. Services which are crucial to daily business operation, not duplicated elsewhere, and of high visibility to upper management must become the prime focus of the library or information center. All costs must be justifiable to the maximum extent possible and librarians must increasingly learn to build cost benefit presentations, as well as cultivate those services which can be more readily identified as highly valuable to business operations. A bibliography of 27 periodical citations is appended. (Author/RAA)

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REALISTICALLY REASSESSING THE COSTS AND FUNCTIONS OF SPECIAL LIBRARIES

by

Carol Tenopir

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REALISTICALLY REASSESSING THE COSTS AND FUNCTIONS OF SPECIAL LIBRARIES

By
Carol Tenopir
Automation Support Librarian
University of Hawaii

It seems virtually everyone has taken the occasion of the end of the 1970s to make dire financial predictions for the first years of the 1980s. Although not all economic seers agree on the specifics, they are almost unanimous on their predictions of general trends for this decade. The early years of the new decade will be ones of economic recession, lower corporate profits, increasingly tight money, and uncertainty for the economic future. U.S. News and World Report feels the "uncertain economy, in fact, is likely to be a dominating concern of 1980."(1:p.20) "The effects of the downturn will be felt throughout the country--from family living rooms and company board rooms to the White House and Capitol Hill...."(1:p.26)

New York magazine's economists echo these sentiments. "The United States' economy is moving into the 1980s in an apprehensive, ailing, and uncertain state."(2:p.47) We can look forward to "a period of belt-tightening recession. And depending on the energy-supply situation, outright austerity...."(2:p.47)

"We will not leap into the 1980s, we will crawl," predicts Irwin Kellner, business economist for Manufacturers Hanover Trust Company.(2:p.47) A simultaneous prolonged period of "weak economic growth, high unemployment, high inflation, and high interest rates" (2:p.47) is forseen by Allen Sinai, senior economist for Data Resources,

Inc. Albert Cox, Jr., President of Merrill Lynch Economics, says the near-term outlook "continues to be one of a deep, long recession"(2:p.47), and the economists at A. Gary Shilling and Company believe the inflationary psychology has become so ingrained that "the cost of bringing the party to a halt can fall nothing short of a major, deep, and prolonged recession."(2:p.47)

As Jack Egan of New York magazine sums up the immediate financial future, "All in all, it doesn't add up to a very pleasant or predictable picture."(2:p.47)

Effects on Business

Business, as well as individuals, will undoubtedly be affected in the early 1980s. U.S. News and World Report unequivocally predicts "corporate profits will fall", (1:p.26) by as much as 4-8%. "The recession means production will be dropping steadily through the third quarter of 1980.... Spending for new plant and equipment will suffer. Corporate profits will be hurt by rising costs, lower productivity and soft demand."(1:p.28-30) Businesses expect to be hard pressed in the coming years, money is expected to be tight, and many corporations will feel they must keep expenditures down while trying to build up profit margins.

Although the long-term economic future of the 1980s is much brighter, "and many other experts, despite the grim near-term outlook, also see light at the end of the decade and predict improving conditions by the mid-1980s" (2:p.49), the financial situation as we begin the new decade is obviously a problem no one will be able to ignore. In order to survive the temporary difficulties successfully all businesses will

need to undergo self-examination and reevaluation of expenditures.

Effects on Libraries

What effect will these economic woes have on corporate special libraries? When belt-tightening takes place in the business world, there naturally must be cutbacks in corporate spending. The obvious place to look for potential cutbacks are the overhead areas of the company. Those overhead areas which management views as holding the least critical importance in the day-to-day operation of the company, which have a low profile (and therefore will be least inclined to protest budget cuts vocally), and which provide services which at least in theory could be acquired elsewhere, are the ones first considered for budget decreases. Many of us will recognize the above description as the unsympathetic business manager's view of the corporate library.

Of course, there are special libraries today whose librarians have learned from past crunch periods that the corporate library must assertively expand its scope of influence in the company and provide critical services. These foresightful libraries will survive the troublesome period of the early 1980s, unlike others who continue to tenaciously cling to traditional services and scope.

Much of what most special libraries traditionally do is very difficult to justify quantitatively when overhead must be cut. Books, journals, and other physical library materials can usually be borrowed (if they are bothered with at all) at a local public or large academic library. Most researchers subscribe to several key journals in their fields, and the haphazard, but widely used, "invisible college" approach to knowledge sharing which dominated before the corporate library was

established could resume. If pure research functions are temporarily scaled down in many businesses as Allan Greenspan predicts, the use of journal articles and research materials will correspondingly decrease. He predicts although "there will be a major revival of capital investment in the middle Eighties", the finanical uncertainty that is predicted for the early 1980s, "tends to tilt investment toward quick payoffs, and therefore works against investments with a long time perspective such as basic research."(3:p.96) The provision of traditional research support services such as current awareness profiles (SDI) and literature searching are thus also threatened by economic trends.

If demand for services is temporarily decreased by curtailing some research functions, or services which can not be clearly demonstrated to provide financial benefits for the corporation are to be cut, the traditional special library faces trouble in the first years of this new decade.

All corporate librarians must therefore examine their library's role in the company and determine if the services it is providing are unique, important in the daily company operation, and cost justifiable. Each must be ready to change the library's scope if necessary, demonstrate concrete benefits from service, and have the library become an intregal part of a belt-tightened corporation.

Expansion of Services

One basic technique for survival in hard times is to identify those information related services which are critical to company operation and examine which of these services could or should be within the scope of

the library. Perhaps the old saw of whether it should be called a "library" or an "information center" is well resurrected here. Like it or not "library" has very definite and limiting connotations to most people, including many librarians. Discarding the traditional title may well be a healthy first step in expanding the image throughout the corporation and in the librarian's mind. "Information Center" implies a source in the company to go for answers or information of any type, while "library" still connotes to most businessmen the Carnegie building they visited for books as a child.

Whatever it is called, however, the information center of a company should be just that--a central point for company information of all types. If the corporate library is to be a viable and important resource in the future it must actively seek this expanded role.

There are a wide variety of information services used or needed in every corporation. A review of the literature and information practices in many companies reveals many special libraries are providing some nontraditional services, but in most companies these are considered secondary. Important information services remain widely scattered throughout data processing departments, public relations departments, and inumerable other departments in the company. Many needed services are merely not provided at all because management does not know who to go to for systems design expertise. Following is an examination of some specific information services which can be provided by the library staff. These services are desperately needed in many companies and are often viewed by management as more crucial and more easily cost justified than traditional library services.

Laboratory Notebooks

Every pharmaceutical and chemical firm and many other research based firms have hundreds of laboratory notebooks filled with experiments from every step of the product development procedure. The firms are required by federal law to keep and to provide access to these notebooks and, if faced with a federal investigation, must be able to quickly retrieve all information in the notebooks about a particular product. Laboratory notebooks represent thousands of dollars of past effort and are potentially crucial documents for the future. Efficient access to the contents of the notebooks is also a boon to ongoing development.

The indexing and management of these important internal documents is a natural area for the special library, yet it has not been undertaken by many. Indeed, it is not a simple process to take a group of handwritten laboratory documents and design an effective retrieval system for them. It requires some knowledge of the appropriate science and of the company's products, close interaction with many departments, time to analyze researcher's desires for a system and to weigh these against costs of indexing, and the courage to undertake a new, different project. Librarian's skills of organizing all types of information for retrieval are uniquely suited to this job, however, and close interaction with researchers can bridge subject specialty gaps.

Several information centers have begun indexing their firm's laboratory notebooks, often at the instigation of upper management. Such projects have been described in written reports by Martha J. Bailey of Purdue (4), Pamela Cibbarelli for Allergan Pharmaceuticals (5), and Donna Mendenhall of Uniroyal Chemical (6). Information Centers at

Burroughs-Wellcome in Research Triangle Park, N.C.; Arnar-Stone in McGaw Park, Il.; McGaw Labs in Irvine, Ca. and others have also developed automated retrieval systems for their laboratory notebooks. With careful systems design based on standard information retrieval principles and subject assistance these companies have demonstrated that the library can develop a successful system for laboratory notebooks.

Engineering Drawings

Engineering, architectural, and land development firms also have crucial documents used in the daily work of the companies. Company produced maps and drawings form the backbone of most work by each firm, provide documentation in legal actions, and must be continually referred to or modified. Again, the information center is the natural focal point for access to engineering drawings, yet very few librarians include them within the scope of the library. Housing engineering drawings does require special furniture, but indexing them is a fairly straightforward process once the initial methodology is established.

"A Retrieval System for Engineering Drawings" (7) describes in detail the system developed for the Irvine Company in Newport Beach, Ca. The Jack G. Raub Company in Costa Mesa, Ca. and the Mission Viejo Company in Mission Viejo, Ca. also have established such systems within their libraries. In a variation on a similar theme, M. Leonard Bryan describes a retrieval system for Remote Sensing Data (8).

Public Relations Audio-Visual Materials

Perhaps because of their more convenient size or their familiarity to everyone, many more special libraries include public relations or

historical audio-visual materials in the scope of their collections.

Several recent articles in Special Libraries have described various approaches to the design of retrieval systems for company photographs and slides. (9, 10, 11) The Southern California Gas Company, ARCO, Wyle Laboratories, and many other large corporations have ongoing slide and photograph retrieval systems which have been coordinated by the library.

Corporate photographs, slides, and films are needed for all company reports, for advertising , and for a variety of public relations functions. Instant access to both historical and current materials can save a company time, money, and embarressment. They are materials which are often close to upper management's sentiments, and, indeed, many manager's have found themselves in the frustating position of sifting through thousands of uncataloged photographs looking for one they know to exist. If your company does not have an effective retrieval system for these important materials, it may be time to take the initiative and suggest that such a system be studied, with the library as coordinator. It will almost always be met with interest, as many librarians can attest.

Corporate Reports and Job Files

Another plentiful type of material which is accessed daily by all levels of personnel in every corporation and which is rarely handled by libraries is corporate reports and job files. This class of documents is loosely defined to include contracts, correspondence files, annual or quarterly reports, company published documents, and many types of internal reports. While individual indexing of many of these materials

would be prohibitively time consuming, effective management, control, and at least group indexing is sorely needed. EXXON Research and Engineering Company's information center maintains strict control over corporate documents in an automated system (12), as does United Aircraft Research Laboratories (13), Martin Marrietta Aerospace (14), and VTN, Inc. in Irvine, Ca. More such systems are needed if special libraries are to provide total access to these much used materials.

Another thing these four information centers have in common with their internal documents programs is the extensive use of microforms. Microfilming projects for corporate materials of all types are naturally coordinated through the information center. The initiative can come from management or from the library, but consultation on microfilming and supervision of microfilm projects is an increasingly important part of the information manager's role.

Other Applications

It is clear that information retrieval functions which are crucial to a corporation will vary depending on the type and function of the organization. Items which represent ongoing costs to the corporation and which form the basis of the daily work should be sought out and given first priority by the information center that seeks to provide unique and important services in the future. Many of these applications will vary, yet potential services are almost always of high visibility, are used by all levels of corporate personnel, and are crucial to daily operations. Some other unique services which can be employed by special libraries are listed below. The scope of the finacially justifiable information center is limited only by a company's needs and the

librarian's imagination.

--Editing or writing corporate reports
--Preparing package insert or labeling literature
--Coordinating microfilm projects
--Answering query mail about company projects
--Cataloging specimens
--Designing or assisting in the specifications for automation projects
--Developing data bases of ongoing project information, personnel files, conference schedules, etc.
--Cataloging all types of non-bibliographic company generated information
--Creating personal file systems for researchers

How to Cope

Many special librarians will protest that expanding the scope of their library would be impossible because they are understaffed and overworked as it is. Now is the time, however, to redirect information center efforts into areas which are more easily cost justified, more likely to be supported by management, and which are more visible. Budgets will never be increased unless the librarian can demonstrate that worthwhile services are being offered. Indeed, budgets may be decreased if librarians refuse to change the information center's priorities to meet the real needs of the company.

There are several ways to continue traditional services while beginning to offer new ones. Many libraries have initiated departmental payment of materials in the department subject area, or are making increasing use of interlibrary cooperation, purchase of individual articles as needed from information services, or use of nearby large libraries' collections. When special projects are undertaken to meet a specific corporate need, persons or funds from outside the library are also often available.

Another way to increase the library's financial and personnel resources is to actively pursue or help in the pursuit of contracts which require information management skills. Many companies exist by the contract process and, although all special libraries indirectly serve this process, few actively get involved in bringing in projects and revenue for the company. A department which has the potential of increasing corporate profits rather than acting purely on overhead can justify staff or budget increases.

Another way to eventually reduce the staff time required for routine functions and to improve service, is to automate library procedures. A more in depth look at automation is included in the following section.

Automation

It is essential for all special librarians to become computer-literate and to be leaders in their company in automation projects, because "anything computer-related appears to be mushrooming" and "it's become the most recession-proof, resilient field", (15:p.54) and it makes the provision of more effective service possible. Many data processing departments are picking up the slack in the burgeoning automated information retrieval field--the slack that rightly should be shared by the information specialists in the library.

James Martin, in an interview in Datamation, predicts: "A very major part of the future of all corporations is going to be data base technology. And it's now becoming clear that there are going to be many data bases, not just one, and these are going to be connected to networks."(16:p.86)

This is a natural place for librarians to take a leadership role. Librarians know about data bases. We have been working with a variety of both manual and automated ones for years. We know how information units need to be arranged for easy retrieval, the importance to full retrieval of assigned subject terms in addition to natural language searching, how to structure output for consistent readibility, and what is needed to make an information network work. Librarians have been trained to interpret user needs and to translate these needs into a retrieval mechanism (eg. indexes and abstracts, card catalogs, online searches, etc.) Why then do the data processing departments and management so rarely think of their own information professionals (i.e. librarians) for automation system design projects? Lack of visibility, inflexibility in a predetermined function, and our own failure to educate and assert ourselves in these areas are often the culprits. Librarians need to become involved in the growing area of automation, by educating themselves and by actively seeking out potential needs throughout their companies.

Harvey L. Poppel, senior vice president of Booz, Allen, and Hamilton, Inc., has advice for data processing personnel which would be well heeded by the special librarian of the '80s:

> ...[a] major new information retrieval possibility relates directly to management productivity and the need for fast retrieval of specific documents, most of which are not routinely fed into a computer. These include office reports, memoranda, contracts, purchase orders, and the like. A corporation often houses pertinent and even crucial documents that managers and professionals either have forgotten about or are simply unaware of. An electronic search of an indexed system for all pertinent information on a given topic can ensure that no such information gaps arise in the evaluation and decision-making processes.
>
> These information retrieval applications may form the backbone of future integrated offices since management can easily cost/justify the desktop terminal upon which so many

other applications can be piggy-backed. (17:p.74)

Librarians must begin to meet these crucial needs and lead in automated retrieval projects now or be passed by in the future.

The automation of existing library systems can also help to provide high quality service at the same or lower costs as limited manual systems can provide. ARCO (18), EXXON (12), United Aircraft Corporation (13), Martin Marietta Aerospace (14), and other successful information centers all make extensive use of automation to control technical processing and retrieval functions. Automation allows for features impossible or prohibitively expensive in a manual system. The automated library catalog can be accessible throughout the company, special subject bibliographies can be generated for individuals, multiple retrieval points can be accessed, searches combining several variables can be made, and a variety of statistics can be generated.

Douglas Price provides guidelines for using cost analysis as a basis for predicting what library automation projects will cost and how this can help in the decision making process. (19) Frank Slater has edited the ASIS publication Cost Reduction for Special Libraries and Information Centers which carries many papers detailing how to hold costs down with effective use of automation. (20)

Information science literature is now replete with discussions of library automation projects (21, 22) and there are an increasing number of information consultants available to advise on or direct these projects.

Cost Justification

In addition to reexamining the scope of the corporate library and

emphasizing needed services in a time of economic recession, special librarians must be prepared to justify library expenditure. As Herbert White concludes in his recent Special Libraries article "Cost-Effectiveness and Cost-Benefit Determinations in Special Libraries", "a true cost-benefit analysis of an overhead organization such as the library, in terms of what it contributes directly to organizational goals, may be neither practical or even possible." (23:p.164) He goes on to stress that libraries must participate in corporate programs which directly affect the profitablity of the company and those which are run by persons in upper management positions. Participation in these kind of crucial operations can lead to cost-benefit figures which show how library participation in a project saved the time of other participants and allowed the project to progress more quickly.

Michael Koenig advises special librarians to document cost savings caused by library services and to include these facts in library budget requests.(24:p.235) Joseph Kramer shows how to use survey techniques to come up with figures illustrating cost savings resulting from library services. (25)

Non-traditional services are not as difficult to cost justify as are other services. Since these services are actively involved with critical company operations and are born of a recognized need for more efficient access to important information, a demonstration of just how that increased efficiency has saved (or can save) corporate funds can be made. A table showing how costly ineffective retrieval can be for a company is reproduced in Table 1.

Lack of effective access to crucial company information can cost companies thousands of dollars. Studies by Booz, Allen, Hamilton, Inc.:

TABLE I

1. The average cost to produce an engineering drawing is $500.00.[1]

   If 10 drawings per year have to be redone because the original is either lost or forgotten,

   The lack of an effective retrieval system costs Company X — $ 5,000 per year

2. It can cost $7,800.00 to produce a 10 minute slide/tape presentation.[2]

   If 2 new slide/tape productions have to be redone because the original is either lost or forgotten,

   The lack of an effective retrieval system can cost Company X — $15,600 per year

3. An engineer's average yearly salary is $18,130.[3]

   If Company X has 25 engineers and if each engineer spends an average of 2 hours per week[4] randomly searching throughout the company for uncataloged drawings,

   The lack of an effective retrieval system will cost Company X — $22,788 per year

4. Recently, a government investigation was launched against a pharmaceutical firm[5] when inconsistent data was presented before a Senate Subcommittee. The raw data and experiments were needed for verification, but because the company lacked an effective retrieval system for their laboratory experiment notebooks, 20 FDA investigators for nearly a year had to manually sift through all of the back experiments. This cost had to be born by the pharmaceutical company.

   The lack of an effective retrieval system cost this company — Hundreds of thousa of dollars

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[1]Xerox Corporation Meeting, Challenge '76. Fullerton, CA., October 1976.

[2]Estimate from AV-111, Irvine, California for an 8-10 minute slide/tape production with 50% photographs and 50% graphics.

[3]Current Population Reports. U.S. Bureau of the Census, 1974. Series P-60.

[4]A conservative time estimate according to most engineers and managers in companies we have worked for.

[5]G.D. Searle and Company. See New York Times. Ja 10, 21; Ap. 8,9; N 15, 17, 1976.

5. A computer program conservatively costs $5,000.00 to produce.[6]

   If 2 programs are duplicated because the original capabilities are forgotten,

   The lack of an effective retrieval system could cost Company X $10,000 per year

6. Environmental regulations and government standards are constantly changing. If a company does not have ready access to the latest legislation or updates that affect its industry,

   The lack of an effective retrieval system could result in a lawsuit or a fine costing Company X Thousands or millions of dolla

7. The average yearly salary for a secretary is $6955.00.[7]

   If Company X has 50 secretaries and if each secretary has to spend 2 hours per week searching for past correspondence or job documentation,

   The lack of an effective retrieval system could cost Company X $17,388 per year

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[6]Based on an hourly salary of $25.00 plus computer run time.

[7]Current Population Reports. U.S. Bureau of the Census, 1974. Series P-60.

> ... indicate managers and other professionals spend as much as 25% of their time on essentially clerical and support work. These chores include looking for filed reports, proof reading, checking the status of ongoing operations,...and tracking down previously published information from internal and external sources.
>
> What is needed to win top management's commitment to the new office automation technology is more concrete cost/benefits data. (17:p.73)

A breakdown of what 25% of the professional time in a company will cost is a startling justification for effective information management services.

A comprehensive and valuable review of recent cost analysis literature in the information field is given in Colin Mick's chapter of the 1979 Annual Review of Information Science and Technology. (26) This review shows an increasing number of articles teach the librarian how to prepare cost/benefit studies of information services. Librarians must learn to come up with facts and dollar figures justifying their services if budgets are to survive the hard financial times of the early 1980s.

Conclusion

The immediate financial future for both individuals and businesses will be one of an increasingly tight economy and careful watch of expenditures. If the corporate special library is to survive this recession intact, librarians must begin to reevaluate both its functions and costs. Services which are crucial in the daily operation of the business, which cannot be duplicated elsewhere, and which are highly visible to upper management must become the prime focus of the library or information center if it is to survive and prosper. All costs must be justifiable to some extent and librarians must increasingly learn to build cost benefit presentations, as well as to cultivate those services

which can more readily be justified.

I do not mean to imply that the 1980s will be a hopelessly bleak time for businesses and corporate libraries. Instead, the 1980s can be an exciting turning point and opportunity (albeit born of necessity) to accelerate the reevaluation of the traditional role of the corporate library. Librarians have the chance to become leaders in corporate automation and to direct the development of sophisticated information retrieval projects. High technology, automation, and pure research are expected to boom by the mid-decade in an exciting surge of new developments and realization of increased potentials. We can no longer afford to view these services as possibilities for the future--the future is arriving now.

Like data processing managers, special librarians are confronted with two alternatives in the new decade: "either they can go along with the tide, or they can control and direct that tide. Those who go along will ultimately be swept up on the beach and abandoned like so much flotsam. Those who choose to seize and maintain control, however, will sail on to broader horizons."(27:p.84) We must meet and direct the future of information services in our corporations and reach for those broader horizons or the future of the special library in the 1980s is very much in doubt.

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